UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND
ONE CONGRESS STREET SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

December 19, 2005

Tracy Babbidge
Connecticut Department of Environmental Protection
Bureau of Air Management
79 Elm Street
Hartford, CT 06106-5127

Dear Ms. Babbidge:

The US Environmental Protection Agency, New England office supports the efforts of the Connecticut Department of Environmental Protection to reduce diesel emissions from mobile sources statewide. In New England, diesel engines are the third largest human-made source of fine particles, contributing more than 20 percent of the region's fine particle emissions. Health effects of fine particles can include aggravated asthma, difficult or painful breathing, chronic bronchitis, and premature death in people with cardiopulmonary disease. Two counties in Connecticut have been designated by EPA as nonattainment of the national health-based air quality standard for fine particles.

Nationally, EPA has made reducing diesel emissions a very high priority. In the Northeast, EPA Regions 1, 2, NESCAUM and the eight northeast states have launched the Northeast Diesel Collaborative (NEDC) to bring the northeast states together, expand regional programs and significantly reduce diesel emissions.

We are pleased to offer the following comments on the draft Connecticut Clean Diesel Plan:

The Connecticut Clean Diesel Plan represents a comprehensive strategy for reducing statewide diesel emissions, and is a model for other states seeking similar action. One of the strengths of the proposed plan is that it includes a combination of cleaner fuel, retrofit, idle reduction, and other measures to address this problem over time. EPA supports and promotes a multi-faceted approach to reduce diesel emissions. This is critical since no single strategy or technology works in all situations. For example, the combination of diesel particulate matter filters (DPFs) and ultra-low sulfur diesel fuel (ULSD) reduces per vehicle emissions by as much as 90 percent in many applications. However, experience shows that it is necessary to carefully evaluate the exhaust temperatures through data logging before using a DPF on any vehicle. This is needed to ensure that the exhaust achieves a sufficiently high operating temperature to enable the DPF to work. Alternatively, a diesel oxidation catalyst (DOC) can be used in almost any setting, does not require the use of ultra-low sulfur diesel fuel, and will reduce fine particle emissions by about 20%. The

combination of a DOC with a crankcase filter will reduce particulate emissions by about 33%, and can help reduce in-cabin emissions, especially important for school buses and other equipment. Given that pollution control technology is changing regularly, EPA supports a strategy that encourages sectors to use multiple technologies to reduce emissions.

EPA strongly encourages the Connecticut plan to support the use of EPA or California Air Resources Board (CARB) verified pollution control technologies. These technologies have been through a rigorous testing process to confirm the emissions reductions they will achieve in specific applications. The verification process provides a means to compare the respective benefits of various technologies and guarantees warranty from the manufacturer. For a list of EPA verified technologies, please visit: http://www.epa.gov/otaq/retrofit/retroverifiedlist.htm. For information about CARB's Verification Program and their list of verified technologies, visit: http://www.arb.ca.gov/diesel/verdev/verdev.htm.

EPA commends Connecticut's effort to identify innovative sources of funding for the implementation of the Diesel Plan. For the plan to be fully successful, Connecticut needs a dedicated source of funding. In California and Texas, the Carl Moyer fund and Texas Emissions Reduction Program (TERP), respectively, have provided a dedicated source of funds for diesel emission reductions programs in those states. More recently, New Jersey passed a new state law requiring emission controls on all transit buses, garbage trucks, and publicly owned diesel vehicles and equipment. This program will be funded through a portion of revenue from the existing state Corporate Business Tax. The draft report identifies several promising strategies, including the use of Congestion Mitigation Air Quality (CMAQ) funds, tax incentives such as sales tax waivers on the purchase of new equipment, incentive grants, and potential reprogramming of the State's corporate business tax.

Finally, EPA recommends that Connecticut consider air quality and environmental justice issues when making decisions about how to implement the final strategy, targeting for early action those communities that are disproportionately burdened by pollution.

Comments on each sector follow:

School Buses

The draft report mentions potential challenges with the availability of ULSD for on-road vehicles, including school buses. Since the federal law requiring the use of ULSD in on-road vehicles goes into effect in October, 2006, there should be no concerns regarding the availability of ULSD for on-road applications in Connecticut after that date.

Recognizing the difficulty of attempting to change the requirements of existing school bus transportation contracts in order to bring about retrofits statewide, Option 3 of the proposed plan appears most likely to prove successful. This option would provide tools and resources to encourage accelerated fleet turnover/replacement. The incentive grants proposed under this option would also help school districts offset the cost of purchasing model year 2007 buses, and help achieve both NOx and PM emission reductions.

On-road Fleets

This chapter mentions two off-road fleets, locomotives and marine vessels on which we would like to comment. We recommend that Connecticut consider the use of highway diesel fuel (low sulfur fuel with a sulfur content of 300-500 ppm) in these settings. The cost differential for this fuel compared to off-road diesel (with a sulfur content of 3000-5000 ppm) can be as low as 1-3 cents per gallon and it can reduce fine particle emissions by 10-20%. The MBTA is currently using low sulfur diesel fuel in all its commuter locomotives operating out of Boston.

EPA also encourages Connecticut to consider the use of DOCs on locomotives. The demonstration project currently underway in Boston will provide useful information on the potential for this strategy to address locomotive emissions. This past October, the Massachusetts Bay Transportation Authority (MBTA) installed a DOC on one of its commuter locomotives. Emissions testing will be conducted this winter – after the DOC has been operating for 90 days – to confirm the expected emission reductions, between 15-35% . Using funds from an EPA enforcement settlement, the MBTA will then install DOCs on additional commuter trains. Connecticut could consider implementing a similar strategy with its locomotives, once the demonstration project is complete.

Construction

Connecticut's Clean Air Construction Initiative has led to the retrofit of approximately 200 pieces of construction equipment and has demonstrated the efficacy of using contract requirements to reduce emissions in construction projects. It makes sense for the statewide plan to extend this approach to other projects, as mentioned in both options 1 and 4.

EPA also encourages Connecticut to consider the use of re-powers or engine replacement for construction equipment. Hundreds of re-powers have been successfully implemented on construction equipment in Texas and in California. For uncontrolled equipment with a lot of useful life left but with a Tier 0 engine, a re-power can be a more affordable option than replacing the entire machine.

One important part of any replacement and retirement program is consideration of what happens to the original equipment that is replaced. EPA recommends that high-emitting equipment which is replaced with cleaner equipment should conform to two conditions in order for the emissions benefits to be realized. First, the replacement and retirement should be surplus and not part of normal fleet attrition. For example, equipment replaced should be usable equipment that currently operates and can be expected to perform in the future. Second, the equipment replaced should be scrapped or otherwise disposed so that it does not continue to operate in the airshed.

The Clean Diesel Plan indicates that there is limited experience with DPFs on construction equipment. As with on-road applications, it is necessary to carefully evaluate exhaust temperatures through data logging before using a DPF on any vehicle. Connecticut should be aware that to date, EPA has verified only a few technologies for construction equipment, but we are encouraging technology suppliers to seek verification of such systems for non-road applications including construction, port and agricultural equipment. We are hopeful that in the future more DPF technologies will be available for non-road applications.

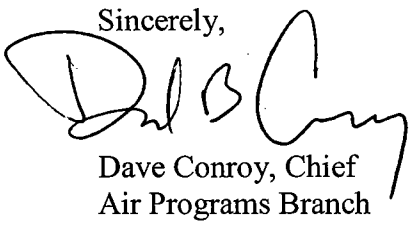
Transit

The report presents several options for addressing the transit fleet. As indicated in the draft report, Option 3 will result in more rapid reduction of fine particles in urban areas, bringing public health benefits to the residents of these communities sooner. We commend the state's effort to use CMAQ funds to finance the addition of DPFs to the transit buses in Hartford. Connecticut has already gained national attention for using CMAQ funds to equip transit buses in Stamford with DPFs. Further expanding the use of CMAQ funds to retrofit additional transit buses statewide is also consistent with the new national transportation funding law, SAFETEA-LU, which prioritizes the use of CMAQ funds for diesel retrofit projects.

Finally, given that the goal of the plan is to significantly reduce fine particle emissions statewide, we encourage Connecticut to consider additional, non transportation related strategies that could make sense as part of a statewide strategy. For example, working to reduce fine particle emissions from certain types of stationary sources such as home heating oil and wood burning stoves, could be part of a comprehensive and cost effective program, and should be considered in concert with the transportation strategies included in the draft plan.

Thank you for the opportunity to comment. EPA looks forward to working with Connecticut as it finalizes and implements its plan to reduce diesel emissions statewide. If you have any questions or comments, please contact me at 617/918-1661, or conroy.dave@epa.gov, or Lucy Edmondson of my staff, 617/918-1004, edmondson.lucy@epa.gov.

Sincerely,



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